Metal Castings

TRI Releases for Foundries (SIC 332, 3365, 3366 and 3369) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg Releases Per Facility
Copper[M]	249	78,577	100,548	4,554	0	349,835	533,514	2,143
Nickel[C, M]	182	23,309	31,804	1,471	0	122,406	178,990	983
Chromium[M]	182	47,389	33,191	1,653	0	162,923	245,156	1,347
Manganese[M]	179	163,447	84,164	3,258	0	4,891,621	5,142,490	28,729
Phenol	89	219,560	421,803	4,490	0	53,891	699,744	51,996
Lead[C, M]	76	9,671	24,366	230	0	352,489	386,756	5,089
Diisocyanates	65	12,035	13,152	260	0	9,022	34,469	530
Manganese Compounds[M]	50	37,530	63,037	3,020	0	2,496,212	2,599,799	
Chromium Compounds[C, M]	45	41,903	70,489	1,529	0	779,154	893,075	19,846
Copper Compounds[M]	36	14,953	9,020	517	0	65,500	89,990	2,500
Zinc (Fume or Dust)[M]	35	71,228	144,470	2,104	0	1,696,554	1,914,356	54,696
Nickel Compounds[C, M]	32	12,241	7,188	512	0	724	20,665	646
Methanol	32	1,952,231	451,245	7	0	0	2,403,483	75,109
Zinc Compounds[M]	31	40,379	121,541	2,956	0	12,733,217	12,898,093	416,068
Aluminum (Fume or Dust)[M]	31	40,491	186,471	259	0	792,270	1,019,491	32,887
Triethylamine	30	235,144	1,143,297	5	0	5	1,378,451	45,948
Phosphoric Acid	26	157,071	578	10	0	86,093	243,752	9,375
Xylene (Mixed Isomers)	24	568,145	284,447	4	0	0	852,596	35,525
Cobalt[C, M]	24	1,450	1,832	501	0	5	3,788	158
Naphthalene	22	201,461	104,137	263	0	9,481	315,342	14,334
Molybdenum Trioxide	22	2,260	1,755	275	0	2,547	6,837	311
1,2,4-trimethylbenzene	18	188,854	54,393	1	0	32,850	276,098	15,339
Lead Compounds[C, M]	16	5,638	13,160	579	0	221,774	241,151	15,072
Formaldehyde[C]	16	75,414	78,441	245	0	11,436	165,536	10,346
Toluene	13	334,212	179,171	20	0	14	513,417	39,494
Barium[M]	13	34,486	3,691	135	0	141,150	179,462	13,805
Aluminum Oxide (Fibrous Forms)[M]	11	82,060	18,828	250	0	592,750	693,888	63,081
Certain Glycol Ethers	10	119,511	85,824	0	0	0	205,335	20,534
Sulfuric Acid	10	25,739	510	5	0	0	26,254	2,625
Nitric Acid	10	2,685	7,640	0	0	0	10,325	1,033
Ethylene Glycol	9	48,835	14,045	3	0	68,000	130,883	14,543
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	9	6	1,604	0	0	0	1,610	179
N-methyl-2-pyrrolidone	8	86,624	3,520	5	0	482	90,631	11,329
Ammonia	8	92,708	325,575	3,002	0	0	421,285	52,661
1,1,1-Trichloroethane[O]	7	182,997	61,382	0	0	0	244,379	34,911
Barium Compounds[M]	6	23,455	5	201	0	43,465	67,126	11,188
Cumene Hydroperoxide	6	2,000	1,300	0	0	3,400	6,700	1,117
Hydrogen Fluoride	6	1,250	1,130	0	0	0	2,380	397
Benzene[C]	5	3,150	239,000	7	0	36	242,193	48,439
Chlorine	5	8	5	615	0	0	628	126
Cobalt Compounds[C, M]	4	15	505	0	0	0	520	130
N-butyl Alcohol	4	33,272	250	0	0	0	33,522	8,381
4,4'-isopropylidenediphenol	4	750	0	0	0	0	750	188
Antimony[M]	4	260	260	0	0	0	520	130
Dichloromethane[C]	3	110,912	0	0	0	0	110,912	36,971
Methyl Ethyl Ketone	3	39,851	7,820	0	0	0	47,671	15,890
Trichloroethylene[C]	3	30,426	46,996	0	0	0	77,422	25,807
Styrene[C]	3	33,421	75,457	0	0	0	108,878	36,293
Tetrachloroethylene[C]	3	34,450	16,000	0	0	0	50,450	16,817
Cadmium[C, M]	3	5	6	0	0	0	11	4
Nitrate Compounds	2	1,700	0	23,000	0	0	24,700	12,350
Cumene	2	340	150	0	0	0	490	245
Ethylbenzene	2	4,610	18,439	0	0	0	23,049	11,525
Methyl Isobutyl Ketone	2	41,284	6,367	0	0	0	47,651	23,826
Arsenic[C, M]	2	250	250	0	0	0	500	250
Phosphorus (Yellow or White)	2	10	255	750	0	0	1,015	508
Antimony Compounds[M]	1	5	5	0	0	0	10	10
Beryllium Compounds[C, M]	1	0	0	0	0	0	0	0
Urethane[C]	1	0	0	0	0	0	0	0
Hexachloroethane	1	5	250	0	0	0	255	255
Diethanolamine	1	0	0	0	0	0	0	0
Propylene	1	0	0	0	0	0	0	0
Cresol (Mixed Isomers)	1	0	44,000	20	0	0	44,020	44,020
Polychlorinated Biphenyls[C]	1	0	0	0	0	0	0	0
1,1-dichloro-1-fluoroethane[O]	1	49,416	0	0	0	0	49,416	49,416
Selenium[M]	1	0	5	0	0	0	5	5
	554**	5,621,089	4,604,774	56,716	0	25,719,306	36,001,885	55,048

[C]Known or suspect carcinogens [M] Metals and metal compounds [O]Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Foundries (SIC 332, 3365, 3366 and 3369) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	POTW Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Copper[M]	249	3,386	926,053	12,948,705	49,688	1	13,927,833	55,935
Nickel[C, M]	182	5,811	752,487	2,925,158	23,193	1	3,706,650	20,366
Chromium[M]	182	3,568	947,383	2,042,419	14,667	5	3,008,047	16,528
Manganese[M]	179	2,598	6,528,832	2,834,670	59,838	0	9,425,938	52,659
Phenol	89	2,397	216,754	5,272	10,282	2,671	239,976	2,696
Lead[C, M]	76	1,566	78,229	828,352	22,767	1	930,915	12,249
Diisocyanates	65	5	110,292	55	40,449	2,510	153,561	2,362
Manganese Compounds[M]	50	4,553	5,800,216	6,143,043	152,468	0	12,100,280	242,006
Chromium Compounds[C, M]	45	17,857	4,274,721	5,249,563	1,475	0	9,543,616	212,080
Copper Compounds[M]	36	1,375	101,566	1,288,917	31,743	0	1,423,601	39,544
Zinc (Fume or Dust)[M]	35	861	592,866	1,420,309	85,916	0	2,099,952	59,999
Nickel Compounds[C, M]	32	2,093	101,546	1,463,377	8,969	0	1,575,985	49,250
Methanol	32	2	19,260	0	608	2,616	22,486	703
Zinc Compounds[M]	31	7,308	3,479,603	4,339,541	581,458	0	8,407,910	271,223
Aluminum (Fume or Dust)[M]	31	7,419	1,347,594	1,205,369	1,500	0	2,561,882	82,641
Triethylamine	30	5	250	423,423	228,606	0	652,284	21,743
Phosphoric Acid	26	255	228,515	49,474	8,576	0	286,820	11,032
Xylene (Mixed Isomers)	24	0	3,391	12,170	250	163,869	179,680	7,487
Cobalt[C, M]	24	1,574	21,956	618,986	7,719	0	650,235	27,093
Naphthalene	22	4	21,270	6,920	1,490	8,621	38,305	1,741
Molybdenum Trioxide	22	0	13,042	4,965	1,086	0	19,093	868
1,2,4-trimethylbenzene	18	1	21,671	6,463	260	7,922	36,317	2,018
Lead Compounds[C, M]	16	86	351,495	120,552	29,284	0	501,417	31,339
Formaldehyde[C]	16	3,845	44,078	430	3,530	0	51,883	3,243
Toluene	13	2	1,300	0	0	7,906	9,208	708
Barium[M]	13	294	121,356	70,525	6,830	0	199,255	15,327
Aluminum Oxide (Fibrous	11	0	651,926	17,405	0	0	669,331	60,848
Certain Glycol Ethers	10	0	6,550	13,000	255	0	19,805	1,981
Sulfuric Acid	10	600	15,162	0	12,850	0	28,612	2,861
Nitric Acid	10	250	0	22,772	35,331	0	58,353	5,835
Ethylene Glycol	9	38,810	53,800	17,368	0	0	109,978	12,220
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	9	5	0	0	76,000	0	76,005	8,445
N-methyl-2-pyrrolidone	8	2,435	26,470	13,000	4,902	1,933	48,740	6,093
Ammonia	8	13,195	0	40,250	0	0	53,445	6,681
1,1,1-Trichloroethane[O]	7	0	0	600	250	250	1,100	157
Barium Compounds[M]	6	0	170,228	245,735	250	0	416,213	69,369
Cumene Hydroperoxide	6	0	4,900	0	250	0	5,150	858
Hydrogen Fluoride	6	250	0	47,746	79,000	0	126,996	21,166
Benzene[C]	5	2	250	0	0	0	252	50
Chlorine	5	0	0	0	0	0	0	0
Cobalt Compounds[C, M]	4	0	5,869	394,655	0	0	400,524	100,131
N-butyl Alcohol	4	0	0	0	0	0	0	0
4,4'-isopropylidenediphenol	4	0	78,170	0	0	0	78,170	19,543
Antimony[M]	4	255	0	758	250	0	1,263	316
Dichloromethane[C]	3	0	28	0	0	0	28	9
Methyl Ethyl Ketone	3	0	0	6,458	250	10,822	17,530	5,843
Trichloroethylene[C]	3	0	0	1,350	0	2,000	3,350	1,117
Styrene[C]	3	0	0	0	0	355	355	118
Tetrachloroethylene[C]	3	0	0	250	0	0	250	83
Cadmium[C, M]	3	0	0	0	10	0	10	3
Nitrate Compounds	2	3,700	0	0	0	0	3,700	1,850
Cumene	2	0	400	0	250	0	650	325
Ethylbenzene	2	0	0	0	0	750	750	375
Methyl Isobutyl Ketone	2	0	0	0	53	0	53	27
Arsenic[C, M]	2	0	0	250	0	0	250	125
Phosphorus (Yellow or White)	2	5	19,532	15,043	0	0	34,580	17,290
Antimony Compounds[M]	1	0	0	0	0	0	0	0
Beryllium Compounds[C, M]	1	0	400	0	0	0	400	400
Urethane[C]	1	0	3,000	0	0	0	3,000	3,000
Hexachloroethane	1	0	0	0	0	0	0	0
Diethanolamine	1	1,300	0	0	2,400	0	3,700	3,700
Propylene	1	0	0	0	0	0	0	0
Cresol (Mixed Isomers)	1	6	0	0	0	0	6	6
Polychlorinated Biphenyls[C]	1	0	0	0	0	0	0	0
1,1-dichloro-1-fluoroethane[O]	1	0	0	0	0	0	0	0
Selenium[M]	1	0	5	0	0	0	5	5
	554**	127,678	27,142,416	44,845,298	1,584,953	212,233	73,915,683	113,021

[C]Known or suspect carcinogens [M] Metals and metal compounds [O]Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Releases for Die Casting Facilities (SIC 3363 and 3364) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Copper[M]	79	7,319	17,283	1,006	0	250	25,858	327
Nickel[C, M]	24	835	3,028	0	0	0	3,863	161
Aluminum (Fume or Dust)[M]	21	17,663	257,448	22	0	0	275,133	13,102
Zinc (Fume or Dust)[M]	10	6,747	19,842	0	0	0	26,589	2,659
Lead[C, M]	9	34	59	0	0	0	93	10
Manganese[M]	9	552	824	0	0	0	1,376	153
Zinc Compounds[M]	7	992	6,610	321	0	2,959	10,882	1,555
Chromium[M]	6	39	1,069	5	0	0	1,113	186
Copper Compounds[M]	3	84	1,853	0	0	0	1,937	646
Manganese Compounds[M]	3	0	0	250	0	0	250	83
Trichloroethylene[C]	3	12,689	101,545	0	0	0	114,234	38,078
Nitric Acid	3	250	1,000	0	0	0	1,250	417
Chlorine	3	255	1,705	0	0	0	1,960	653
Certain Glycol Ethers	2	4,800	5,600	0	0	0	10,400	5,200
Ethylene Glycol	2	0	0	0	0	0	0	0
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	2	500	0	0	0	0	500	250
Sulfuric Acid	2	250	750	0	0	0	1,000	500
Lead Compounds[C, M]	1	0	111	0	0	0	111	111
Nickel Compounds[C, M]	1	12	240	0	0	0	252	252
Hexachloroethane	1	1,146	10,316	0	0	0	11,462	11,462
Styrene[C]	1	1,450	0	0	0	0	1,450	1,450
Propylene	1	0	0	0	0	0	0	0
Triethylamine	1	250	5	0	0	0	255	255
Tetrachloroethylene[C]	1	5,800	23,200	.	0	0	29,000	29,000
Beryllium[C, M]	1	0	0	0	0	5	5	5
	100**	61,667	452,488	1,604	0	3,214	518,973	5,189

[C]Known or suspect carcinogens [M] Metals and metal compounds [O]Ozone depleters

*Refer to Section III for a discussion of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Die Casting Facilities (SIC 3363 and 3364) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	POTW Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Copper[M]	79	363	34,284	4,683,629	851	.	4,719,127	59,736
Nickel[C, M]	24	45	2,623	166,911	35	.	169,614	7,067
Aluminum (Fume or Dust)[M]	21	265	233,319	4,852,664	5	.	5,086,253	242,203
Zinc (Fume or Dust)[M]	10	11	20,810	258,685	5	.	279,511	27,951
Lead[C, M]	9	20	515	10,443	10	.	10,988	1,221
Manganese[M]	9	10	776	5,997	.	.	6,783	754
Zinc Compounds[M]	7	303	5,259	488,477	6,955	.	500,994	71,571
Chromium[M]	6	15	760	750	15	.	1,540	257
Copper Compounds[M]	3	1	502	64,928	.	.	65,431	21,810
Manganese Compounds[M]	3	5	16,400	.	4,752	.	21,157	7,052
Trichloroethylene[C]	3	0	1,836	66,330	800	.	68,966	22,989
Nitric Acid	3	98	.	.	24,324	.	24,422	8,141
Chlorine	3	0	.	.	.	.	0	0
Certain Glycol Ethers	2	0	.	50,000	.	.	50,000	25,000
Ethylene Glycol	2	4	70	.	.	.	74	37
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	2	0	.	.	.	.	0	0
Sulfuric Acid	2	0	.	.	.	.	0	0
Lead Compounds[C, M]	1	0	360	1,500,000	.	.	1,500,360	1,500,360
Nickel Compounds[C, M]	1	0	54	7,767	.	.	7,821	7,821
Hexachloroethane	1	0	.	.	.	.	0	0
Styrene[C]	1	0	.	.	.	.	0	0
Propylene	1	0	.	.	.	.	0	0
Triethylamine	1	0	.	.	.	.	0	0
Tetrachloroethylene[C]	1	.	.	2,009	.	.	2,009	2,009
Beryllium[C, M]	1	0	.	750	.	.	750	750
	100**	1,140	317,568	12,159,340	37,752	0	12,515,800	125,158

[C]Known or suspect carcinogens [M] Metals and metal compounds [O]Ozone depleter

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Metal Casting Facilities Reporting Only Foundry SIC Codes (332, 3365, 3366, 3369)*		
Rank	**Facility[1]**	**Total TRI Releases in Pounds**
1	GM Powertrain Defiance - Defiance, OH	14,730,020
2	GMC Powertrain - Saginaw, MI	2,709,764
3	American Steel Foundries - Granite City, IL	1,245,343
4	Griffin Wheel Co. - Keokuk, IA	1,065,104
5	Griffin Wheel Co. - Groveport, OH	1,042,040
6	Griffin Wheel Co. - Bessemer, AL	742,135
7	U.S. Pipe & Foundry Co. - Birmingham, AL	738,200
8	American Steel Foundries - East Chicago, IN	625,191
9	Griffin Wheel Co. - Kansas City, KS	607,266
10	CMI - Cast Parts, Inc. - Cadillac, MI	604,100

Source: *US Toxics Release Inventory Database, 1995.*

*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities*.

Ten Largest Volume TRI Releasing Metal Casting Facilities Reporting Only Die Casting SIC Codes (3363, 3364)*		
Rank	**Facility[1]**	**Total TRI Releases in Pounds**
1	Water Gremlin Co. - White Bear Lake, MN	97,111
2	BTR Precision Die Casting - Russelville, KY	93,903
3	QX Inc. - Hamel, MN	67,772
4	AAP St. Marys Corp. - Saint Marys, OH	55,582
5	Impact Industries Inc. - Sandwich, IL	45,175
6	Tool-Die Eng. Co. - Solon, OH	29,005
7	Chrysler Corp. - Kokomo, IN	20,652
8	Metalloy Corp. - Freemont, IN	13,350
9	Tool Products. Inc. - New Hope, MN	12,194
10	Travis Pattern & Foundry, Inc. - Spokane, WA	11,614

Source: *US Toxics Release Inventory Database, 1995.*

*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities*.

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Ten Largest Volume TRI Releasing Facilities Reporting Foundry and Other SIC Codes (332, 3365, 3366, 3369)*			
Rank	**Facility[2]**	**SIC Codes Reported in TRI**	**Total TRI Releases in Pounds**
1	GM Powertrain Defiance - Defiance, OH	3321	14,730,020
2	GMC Powertrain - Saginaw, MI	3321, 3365	2,709,764
3	Heatcraft Inc. - Grenada, MS	3585, 3351, 3366	1,369,306
4	American Steel Foundries - Granite City, IL	3325	1,245,343
5	Griffin Wheel Co. - Keokuk, IA	3325	1,065,104
6	Griffin Wheel Co. - Groveport, OH	3325	1,042,040
7	Geneva Steel - Vineyard, UT	3312, 3317, 3325	918,478
8	Griffin Wheel Co. - Bessemer, AL	3325	742,135
9	U.S. Pipe & Foundry Co. - Birmingham, AL	3321	738,200
10	American Steel Foundries - East Chicago, IN	3325	625,191

Source: *US Toxics Release Inventory Database, 1995.*

*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities*.

Ten Largest Volume TRI Releasing Facilities Reporting Die Casting and Other SIC Codes (3363, 3364)*			
Rank	**Facility[1]**	**SIC Codes Reported in TRI**	**Total TRI Releases in Pounds**
1	Water Gremlin Co. - White Bear Lake, MN	3364, 3949	97,111
2	BTR Precision Die Casting - Russelville, KY	3363	93,903
3	Honeywell Inc. Home & Building - Golden Valley, MN	3822, 3363, 3900	87,937
4	QX Inc. - Hamel, MN	3363	67,772
5	AAP St. Marys Corp. - Saint Marys, OH	3363	55,582
6	Impact Industries Inc. - Sandwich, IL	3363	45,175
7	Tool-Die Eng. Co. - Solon, OH	3363	29,005
8	TAC Manufacturing - Jackson, MI	3086, 3363, 3714	25,684
9	Superior Ind. Intl., Inc. - Johnson City, TN	3714, 3363, 3398	25,250
10	General Electric Co. - Hendersonville, NC	3646, 3363	20,780

Source: *US Toxics Release Inventory Database, 1995.*

*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities*.

[2] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for Foundries (SIC 332, 3365, 3366, and 3369) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	232	43%	58%	0%	1%	18%	0%	0%	32%
1995	272	40%	58%	0%	2%	16%	0%	1%	32%
1996	264	---	54%	0%	2%	20%	0%	1%	24%
1997	261	---	53%	0%	2%	21%	0%	1%	24%

Source: *1995 Toxics Release Inventory Database*.
* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.
[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.
[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.
[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Source Reduction and Recycling Activity for Die Casting Facilities (SIC 3363 and 3364) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	% Released and Disposed[c] Off-site
1994	60	23%	69%	0%	3%	27%	0%	0%	2%
1995	63	21%	75%	0%	3%	21%	0%	0%	2%
1996	64	---	75%	0%	3%	21%	0%	0%	1%
1997	64	---	76%	0%	2%	21%	0%	0%	1%

Source: *1995 Toxics Release Inventory Database*.
* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.
[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.
[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.
[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Metal Casting Industry*									
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**
Region	**Facilities in Search**	**Facilities Inspected**	**Number of Inspections**	**Average Months Between Inspections**	**Facilities with 1 or More Enforcement Actions**	**Total Enforcement Actions**	**Percent State Lead Actions**	**Percent Federal Lead Actions**	**Enforcement to Inspection Rate**
I	15	8	44	20	2	3	67%	33%	0.07
II	26	16	128	12	10	19	68%	32%	0.15
III	74	61	458	10	19	29	83%	17%	0.06
IV	77	53	505	9	12	24	88%	12%	0.05
V	307	191	1,026	18	45	68	63%	37%	0.07
VI	44	25	103	26	6	14	43%	57%	0.14
VII	40	33	167	14	6	10	30%	70%	0.06
VIII	9	7	16	34	2	2	100%	0%	0.13
IX	54	15	46	70	4	5	100%	0%	0.11
X	23	15	42	33	7	17	94%	6%	0.40
TOTAL	669	424	2,535	16	113	191	71%	29%	0.08

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.